Joint EEA-EPA Event

Wed, January 27, 2021 8:00 am – 10:00 am ET (2:00 – 4:00 pm CET)

Hosted through Microsoft Teams

Event Programme

Wednesday, 27 January 2021			
Time	Item	Details	Speakers
8:00 – 8:40 - Opening remarks **Chairman: Mike Slimak** – National Program Director of the Sustainable and Healthy Communities (SHC) Research Program at the U.S. Environmental Protection Agency (EPA)			
8:00-8:10	Importance and commitment to developing the Report on the Environment (ROE) and its role in fulfilling EPA's mission	EPA Office of Research and Development (ORD) Principal Deputy Assistant Administrator for Science	**Jennifer Orme-Zavaleta**
8:10-8:20	Continuation of collaboration between EPA and EEA on the environment	EPA Office of International and Tribal Affairs (OITA) Acting Assistant Administrator	**Mark Kasman**
8:20-8:40	Presentation of the State of the Environment Report (SOER) 2020	European Environment Agency (EEA) Executive Director	**Hans Bruyninckx**

Event Programme

8:40 – 9:45 - Panel discussion - State of the Environment: European and US perspectives Moderator: **Per Mickwitz** – Lund University, Chair of the EEA Scientific Committee	
EU panellist from Academia	**Frank Geels** - Manchester University, Member of the EEA Scientific Committee
EU panellist from Member States	**Laura Burke**, Chair of the EEA Management Board, Ireland - EPA Director
US panellist from Academia	**Richard Moss**, Adjunct Professor, Department of Geographical Sciences, University of Maryland; Non-resident Fellow, Andlinger Center for Energy and Environment, Princeton University
US panellist from EPA	**Katherine Dawes**, EPA Evidence Act Acting Evaluation Officer
9:45 - 10:00 – Closing remarks	
EPA ORD SHC National Program Director	**Mike Slimak**
EEA Executive Director	**Hans Bruyninckx**
10:00 – End of the meeting	

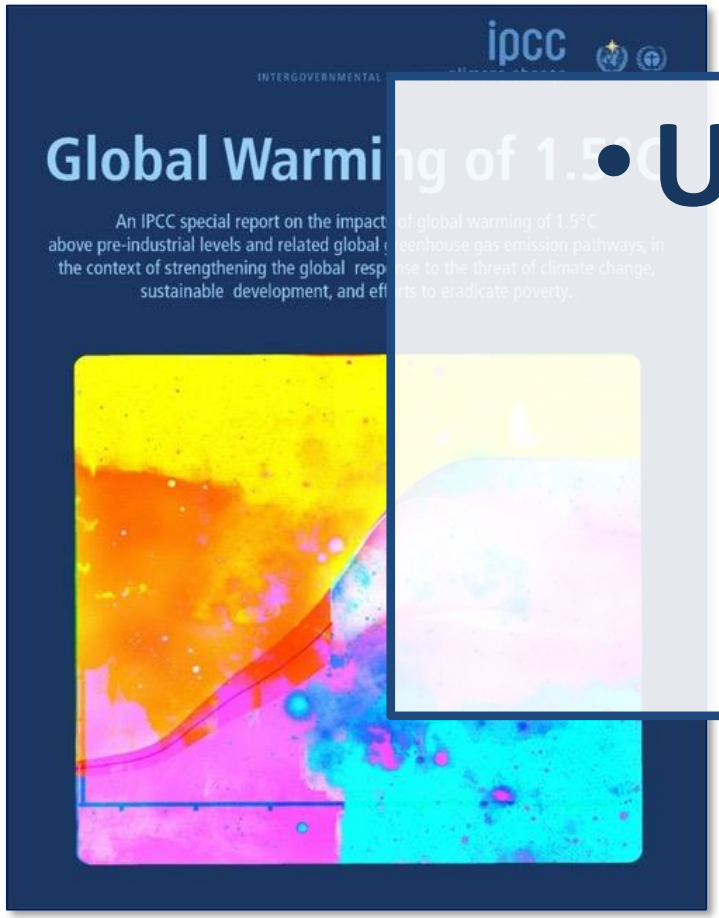
The European environment – state and outlook 2020

Knowledge for the transition to a sustainable Europe

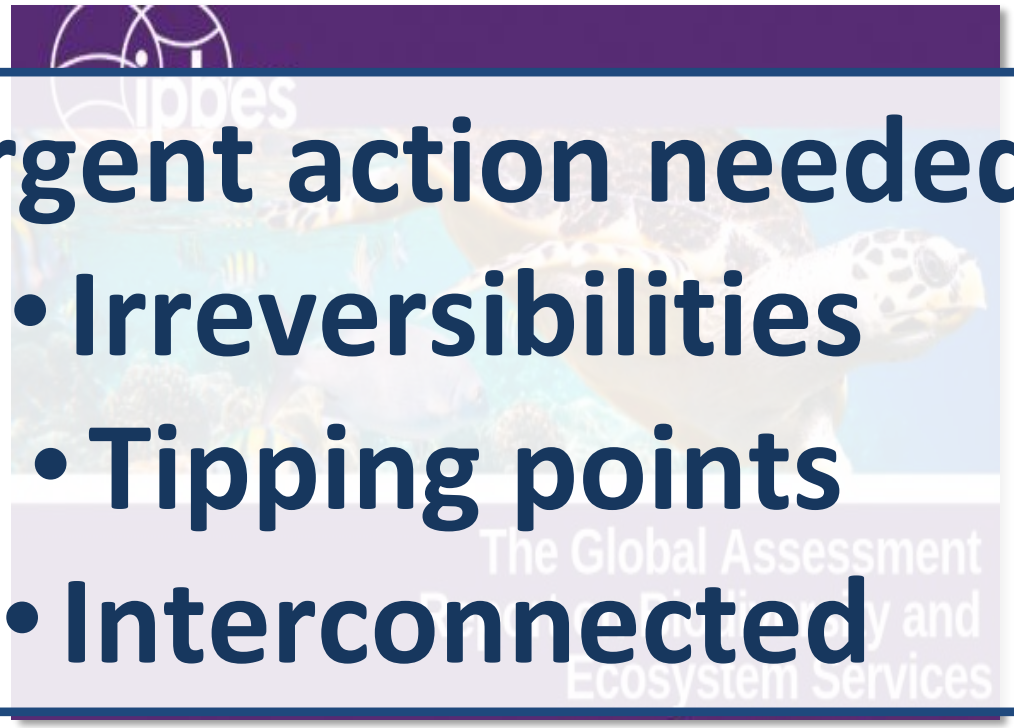
Dr Hans Bruyninckx | US EPA Webinar| 27 January 2021

Global context: unprecedented challenges, improved knowledge

1. IPCC report on global warming of 1.5°C



2. IPBES global report on biodiversity and ecosystem services

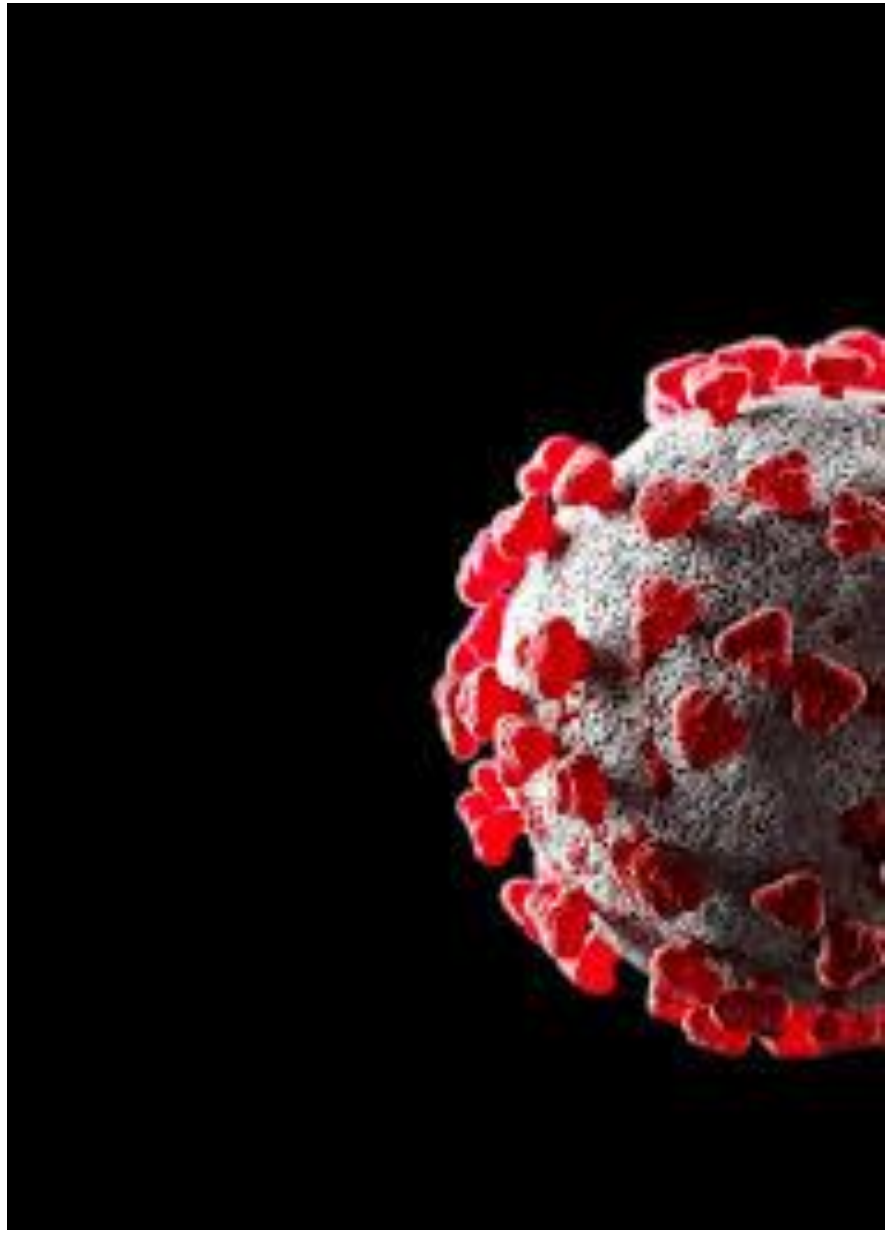


3. International Resource Panel global outlook 2019

- **Urgent action needed**
- **Irreversibilities**
- **Tipping points**
- **Interconnected**

COVID-19 highlights existing issues

- Society depends on a **resilient environmental support system**
- Biodiversity loss and intensive food systems make **zoonotic diseases** more likely
- Environmental factors such as **air quality** appear to influence COVID-19 outcomes
- **Single-use plastics** and **low oil prices** have negative consequences
- Some short-term and **temporary positive environmental impacts**

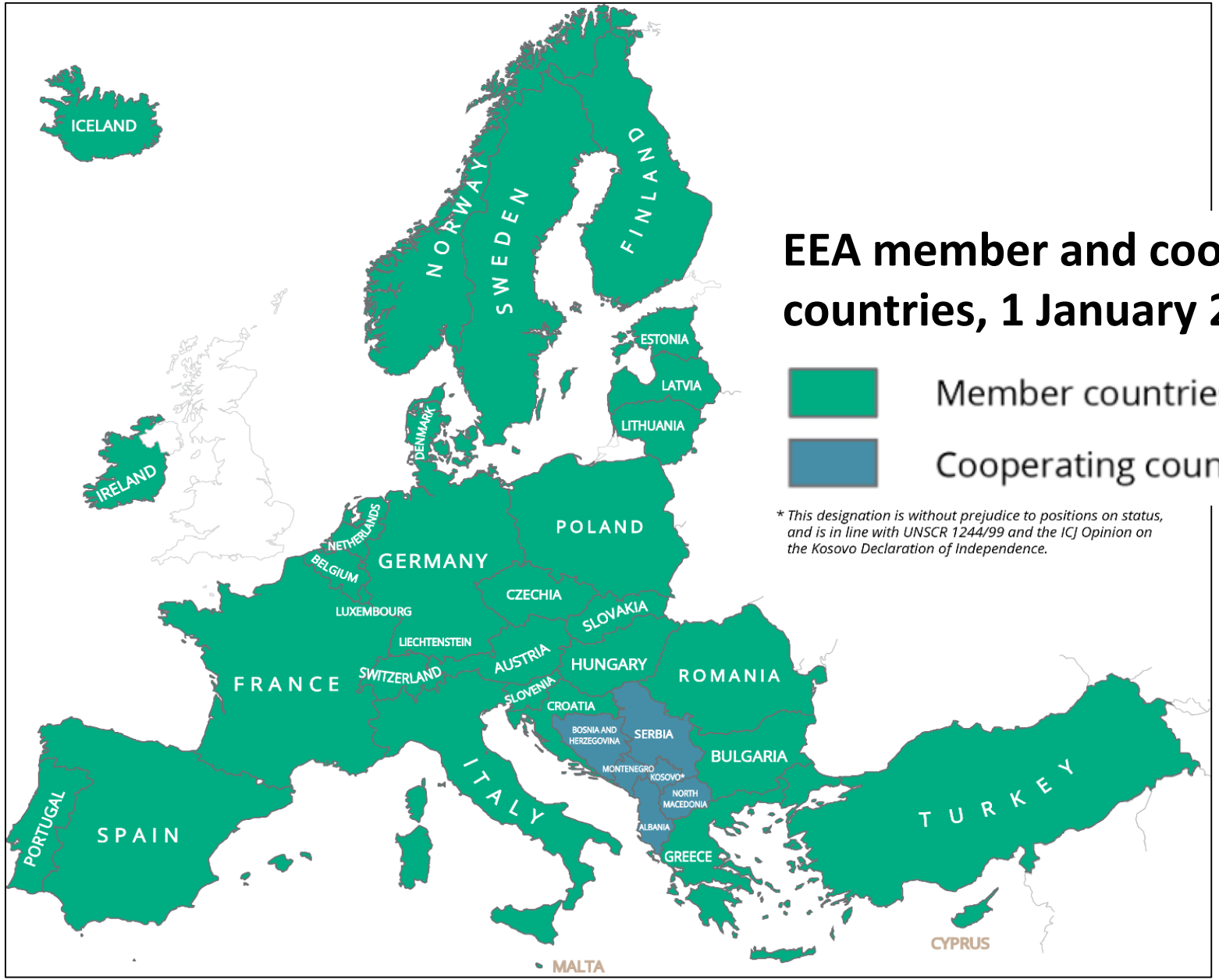


A new policy context: European Green Deal

- First **climate-neutral** continent
- **Biodiversity** Strategy 2030
- New **Circular Economy** Action Plan
- **Zero pollution** strategy
- **Farm to fork** strategy
- **Just transition**
- **Sustainable** European **Investment** Plan
- Future ready economy – new **industrial strategy**

European Environment Agency

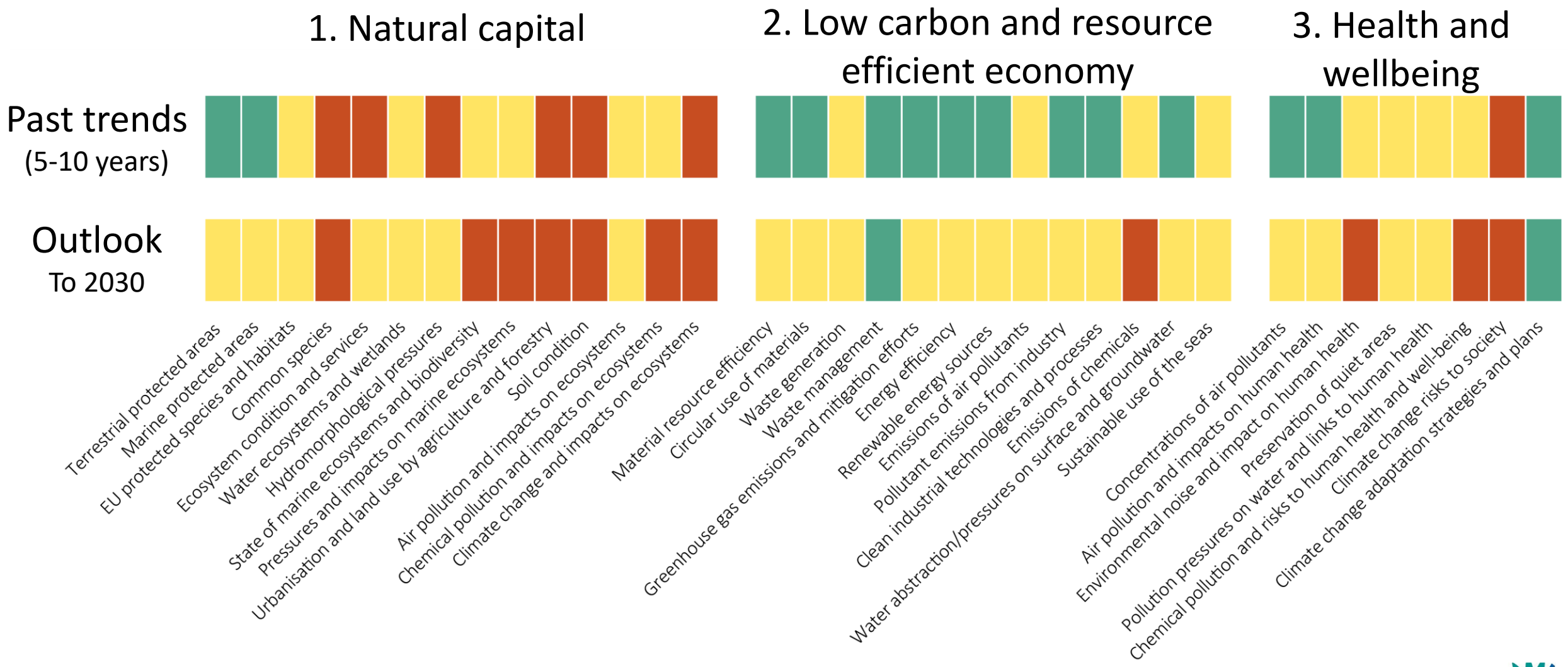
The European Environment Agency and EIONET



European Environment Agency

SOER 2020: some successes but a discouraging outlook

SOER2020



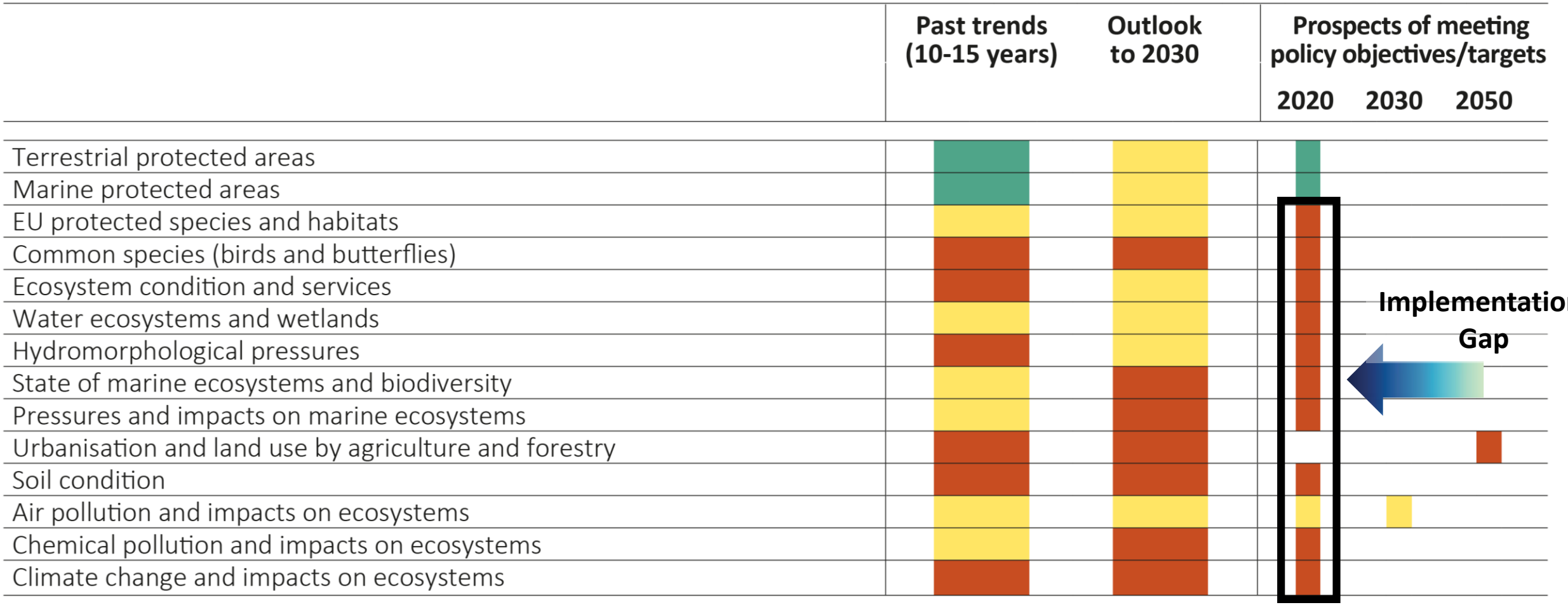
European Environment Agency

1 Natural capital

“The impact of Europe’s alarming rate of biodiversity loss is as catastrophic as climate change”

SOER 2020

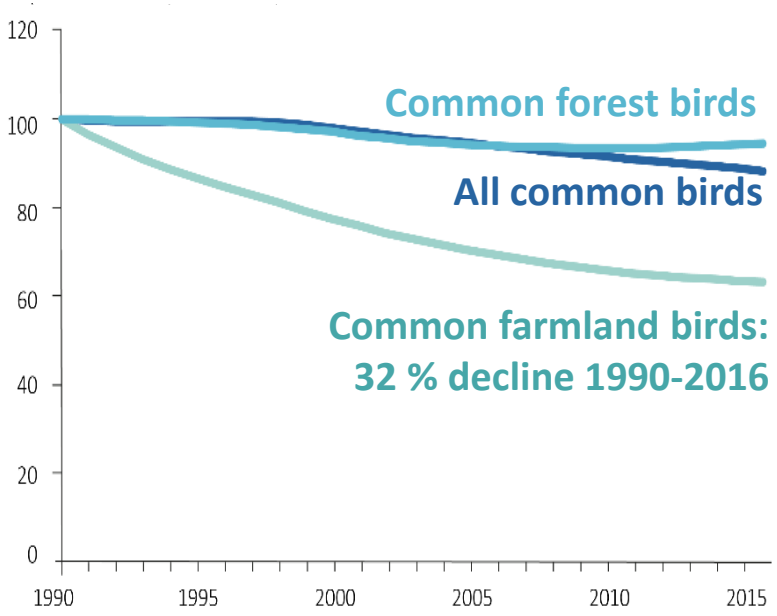
1. Protecting, conserving and enhancing natural capital



But species and habitats still being lost

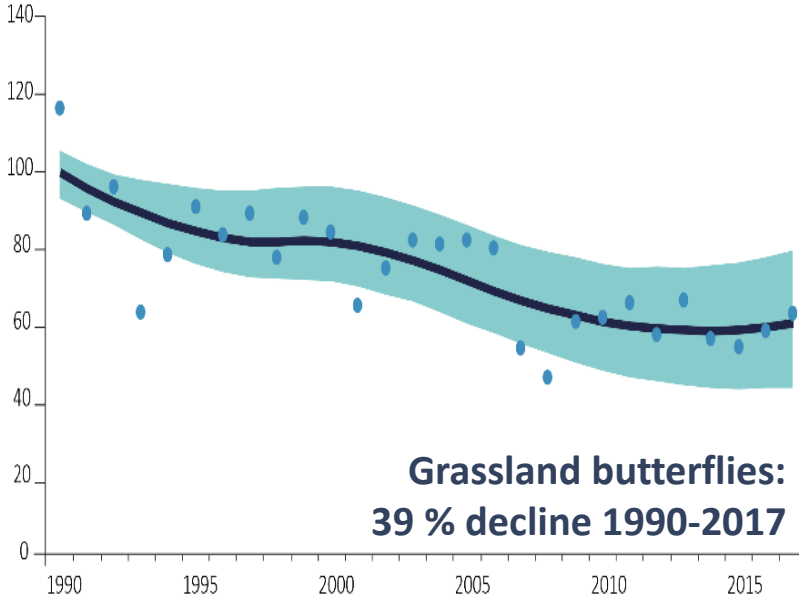
Birds in decline

European population index (1990 = 100)



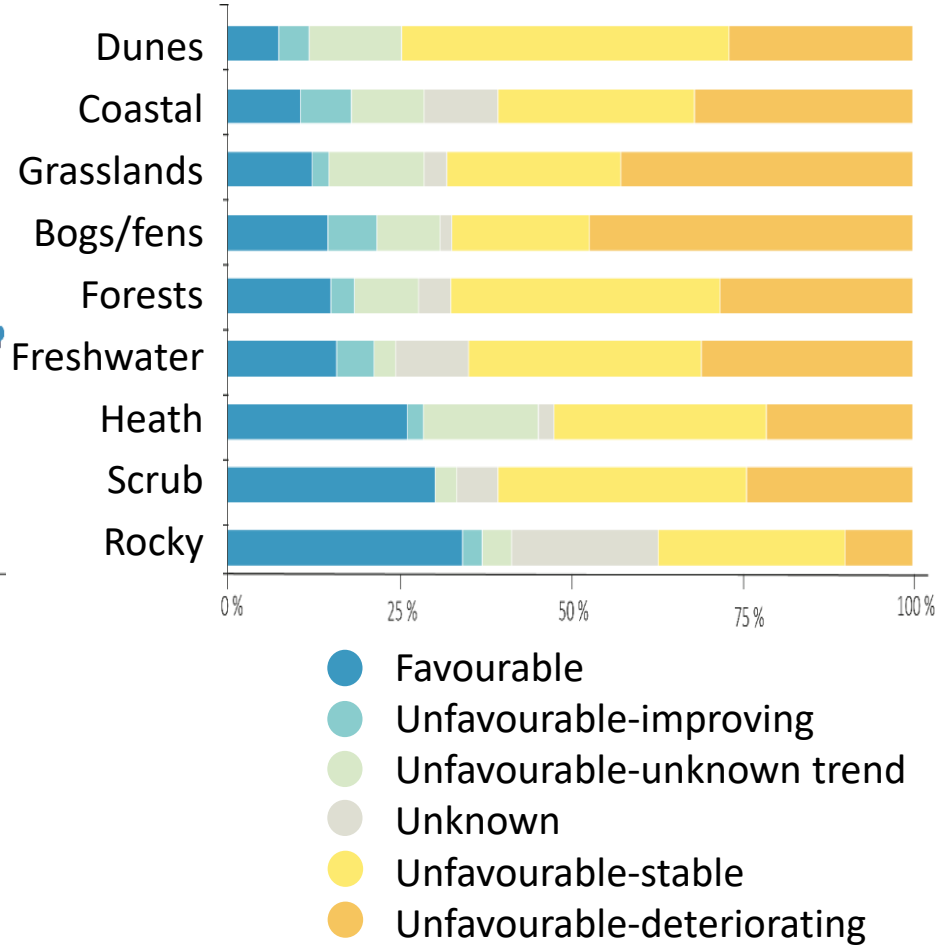
Pollinators in decline

Grassland butterflies: population index (1990 = 100)

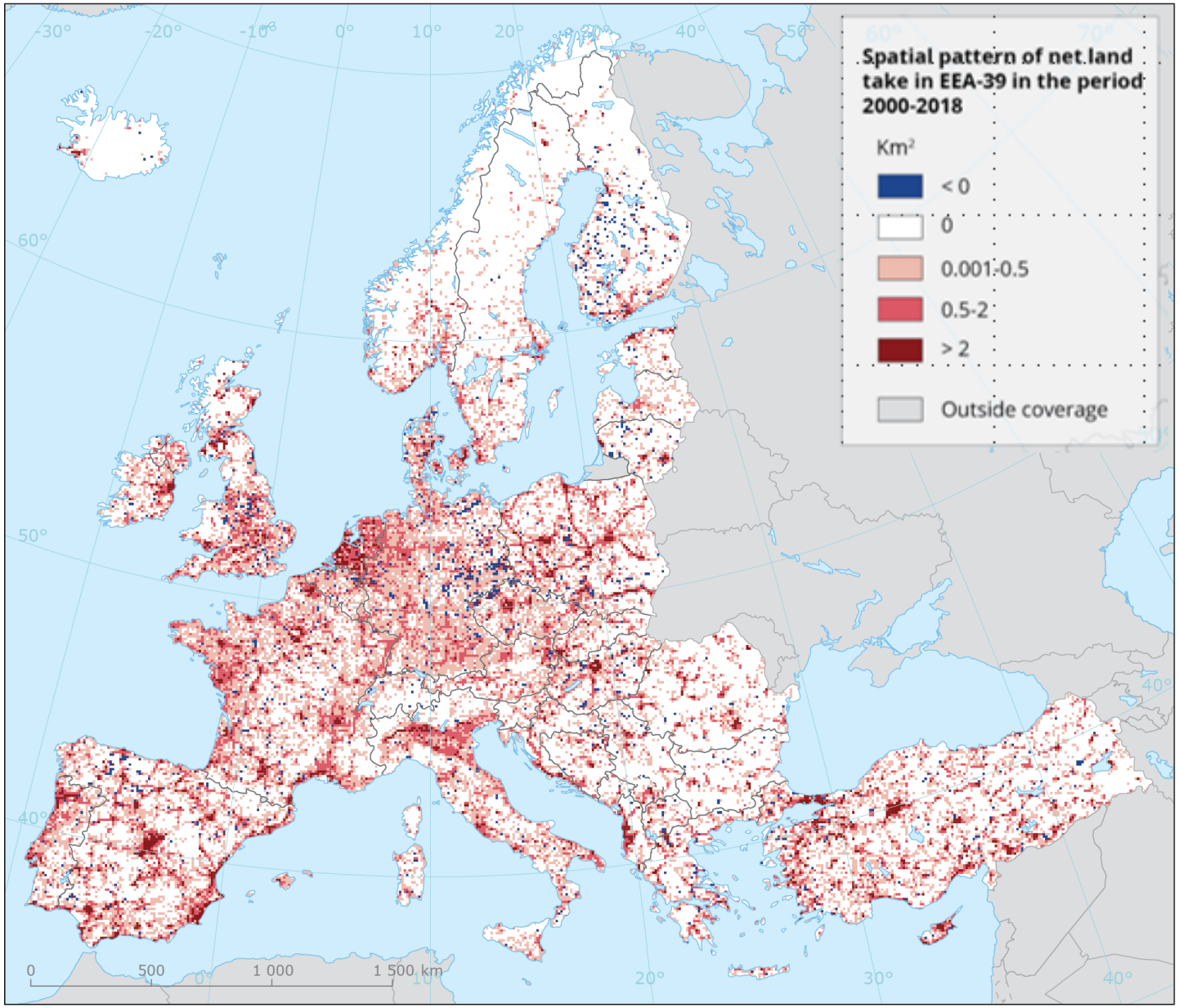


Habitats: unfavourable status

Trends in conservation status of assessed habitats at EU level



Land and soil: under pressure



- Urban sprawl
- Infrastructure
- Landscape fragmentation
- Soil degradation and contamination

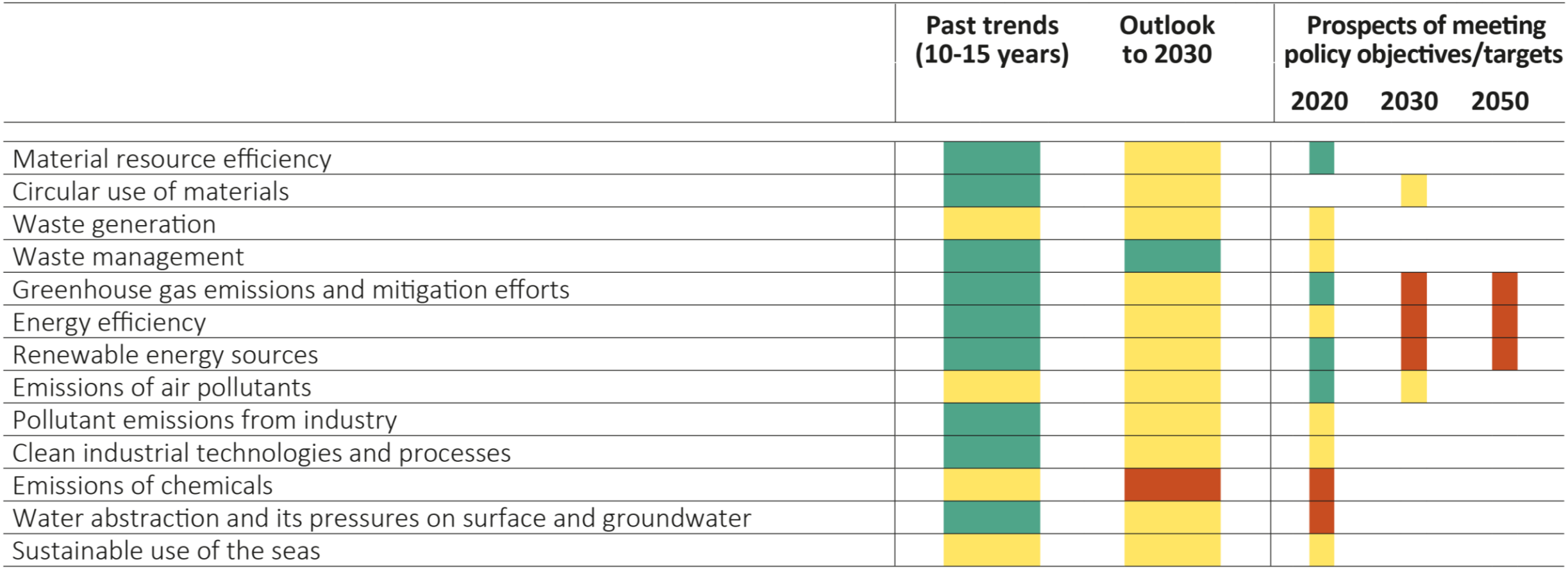
European Environment Agency

2 Resources

“Resource efficiency in the EU is expected to improve, albeit with an increase in material use”

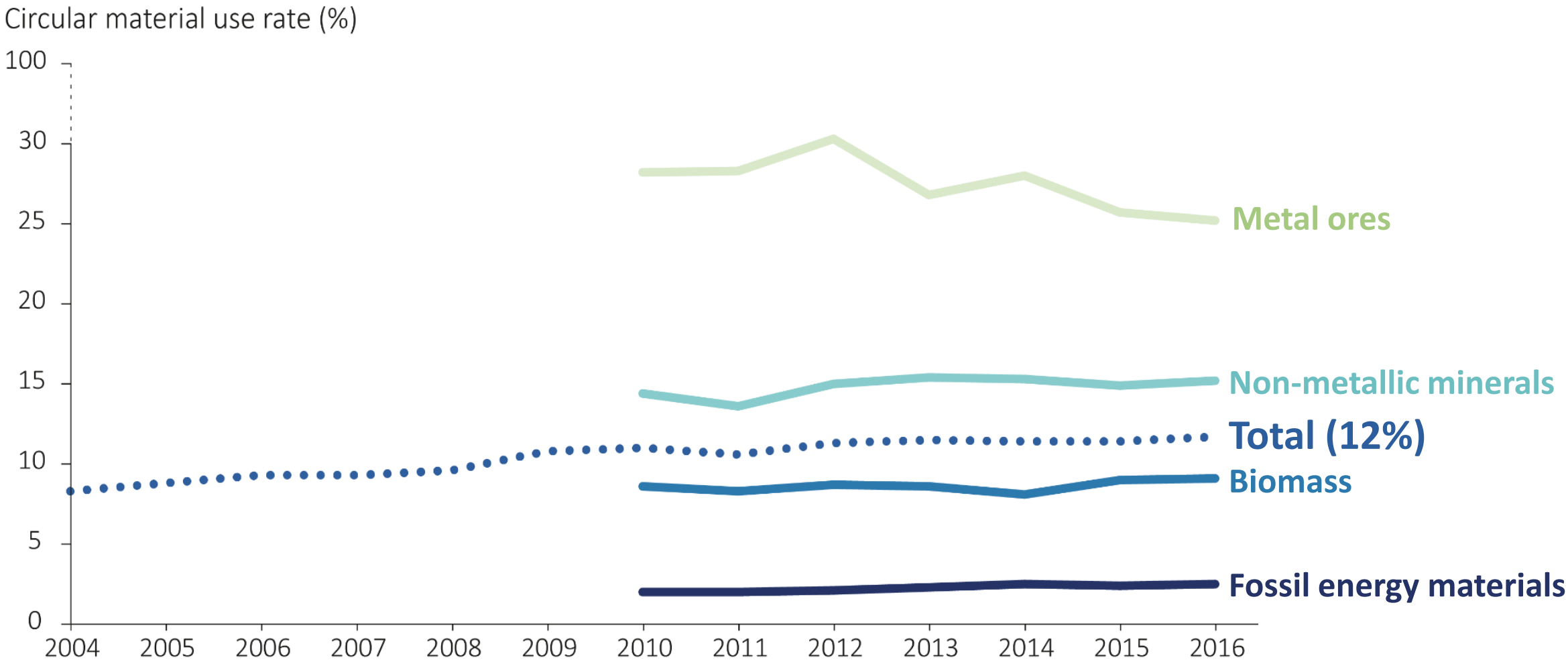
SOER 2020

2. Resource-efficient, circular and low-carbon economy



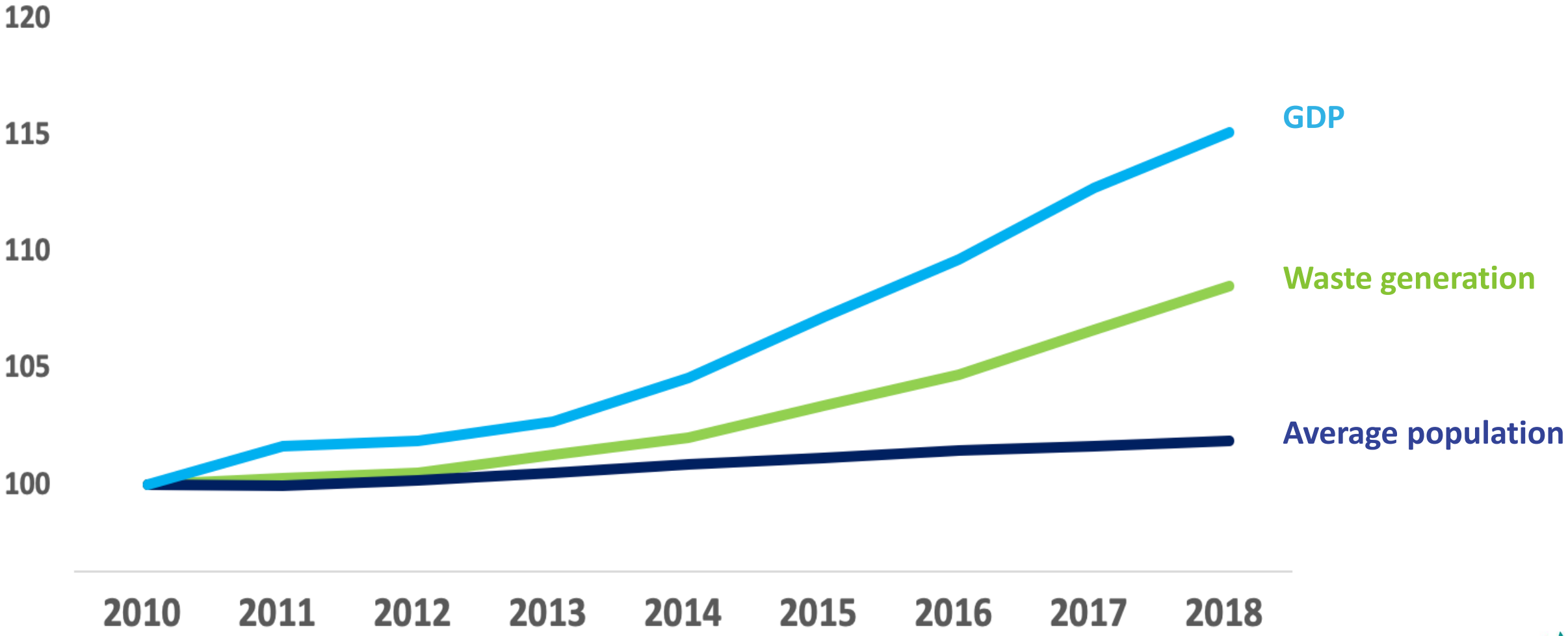
Circular use of materials is still low

Trends in the circular material use rate, EU-28



But waste generation is still increasing

Trends in waste generation, economic development and population, EEA-33



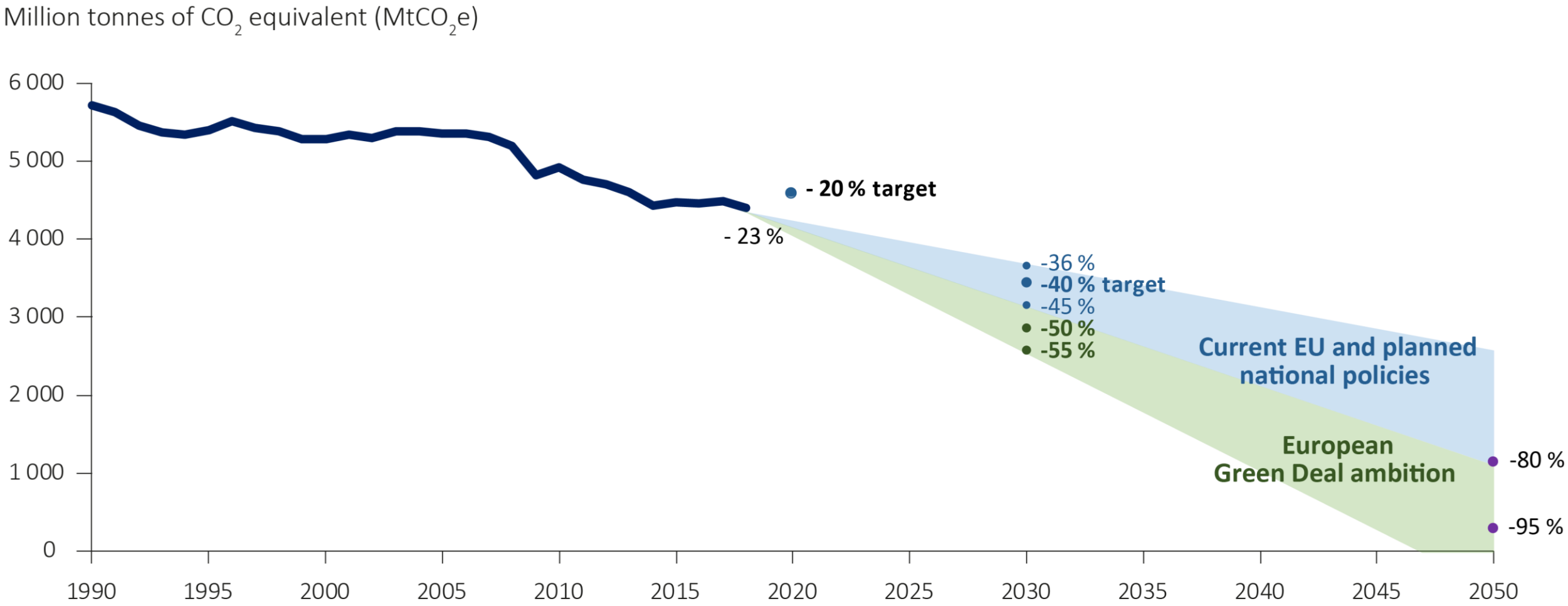
Climate change

"18 of the 19 warmest years on record globally have occurred since 2000"

SOER 2020

Climate change: EU greenhouse gas (GHG) emissions

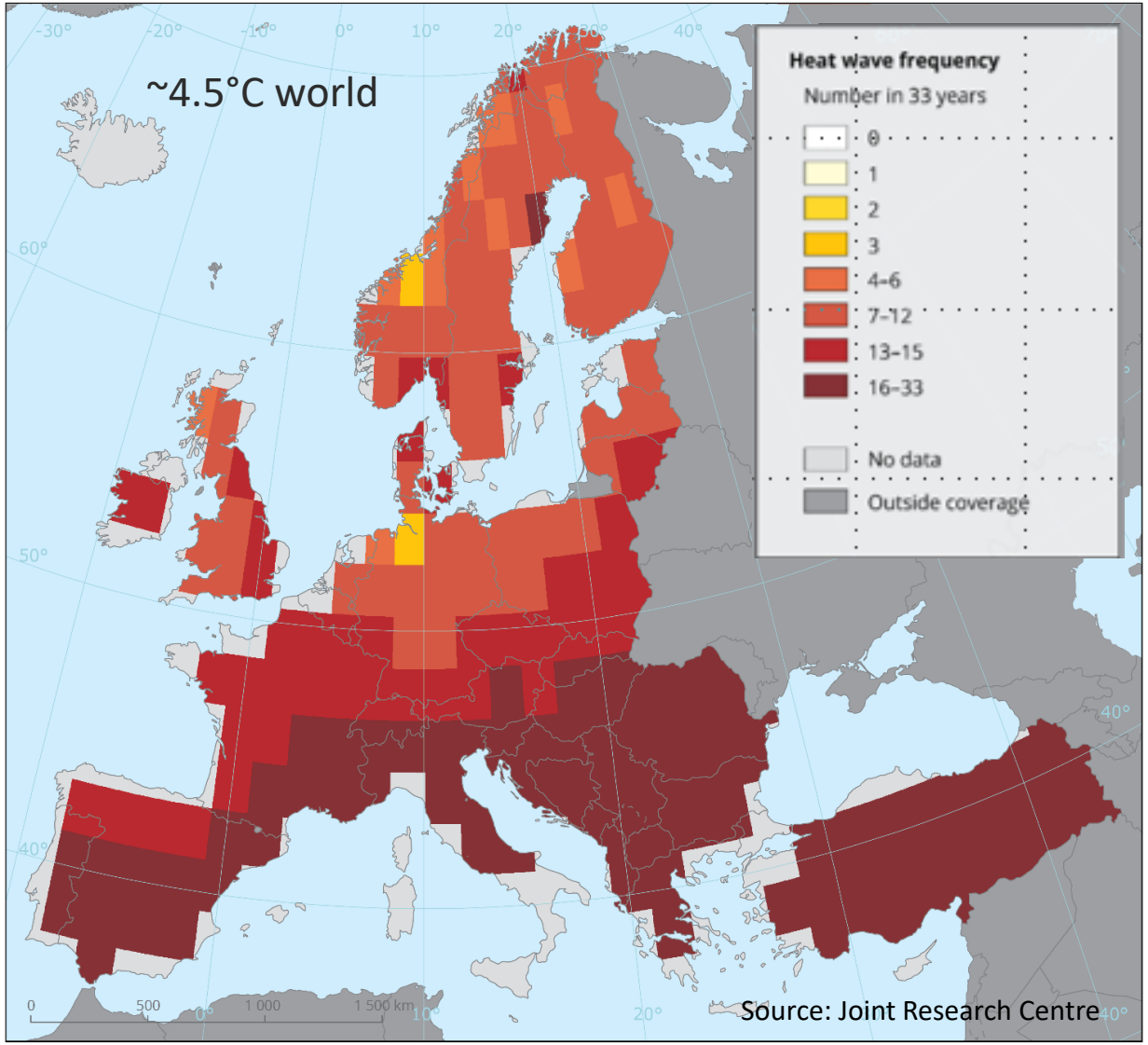
GHG emission trends and projections in the EU-28, 1990-2050



European Environment Agency

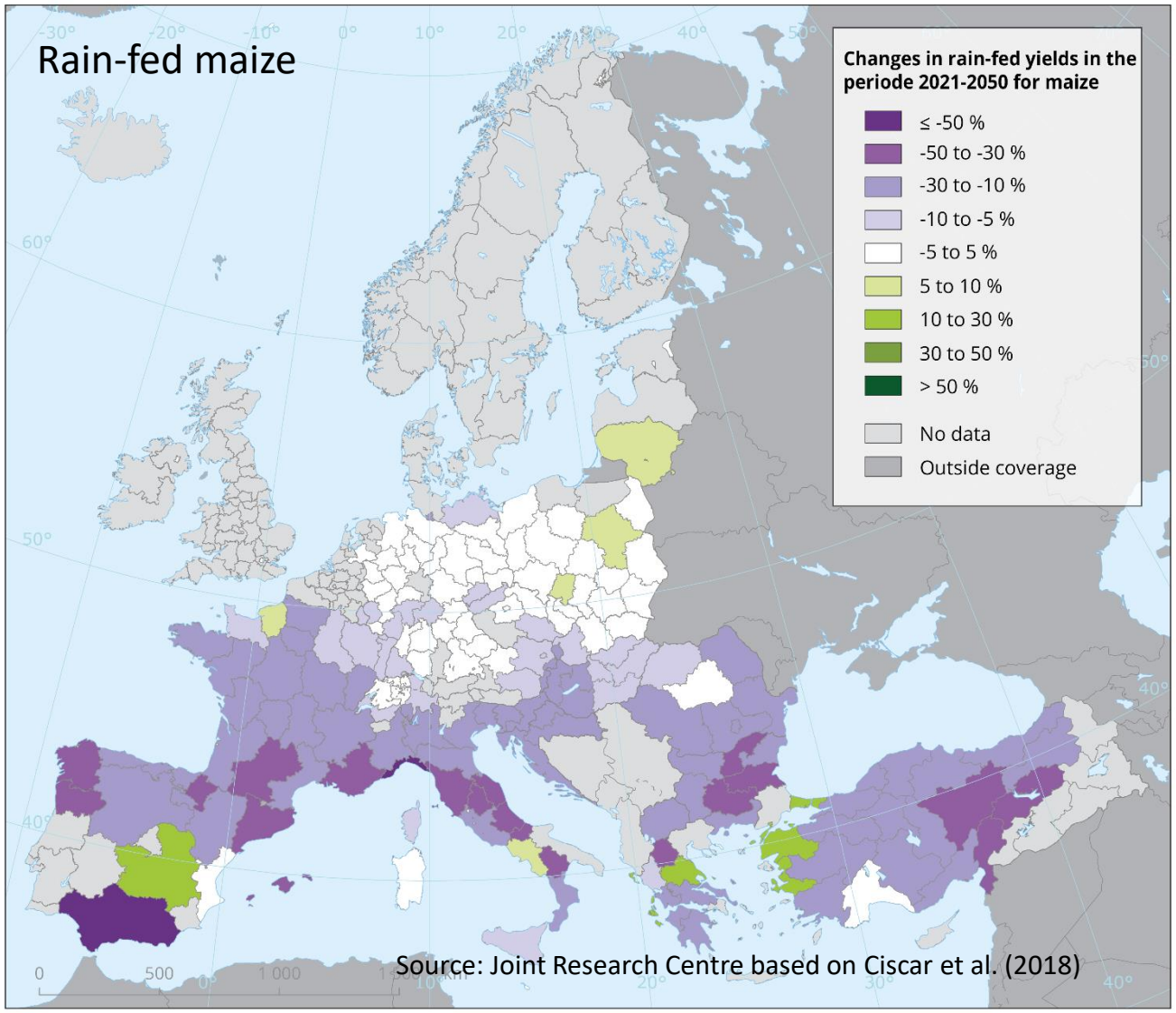
Climate change: economic impacts

Extreme heatwave frequency, projection 2100



Source: Joint Research Centre

Projected change in yield 2021-2050 vs 1981-2010



Source: Joint Research Centre based on Ciscar et al. (2018)

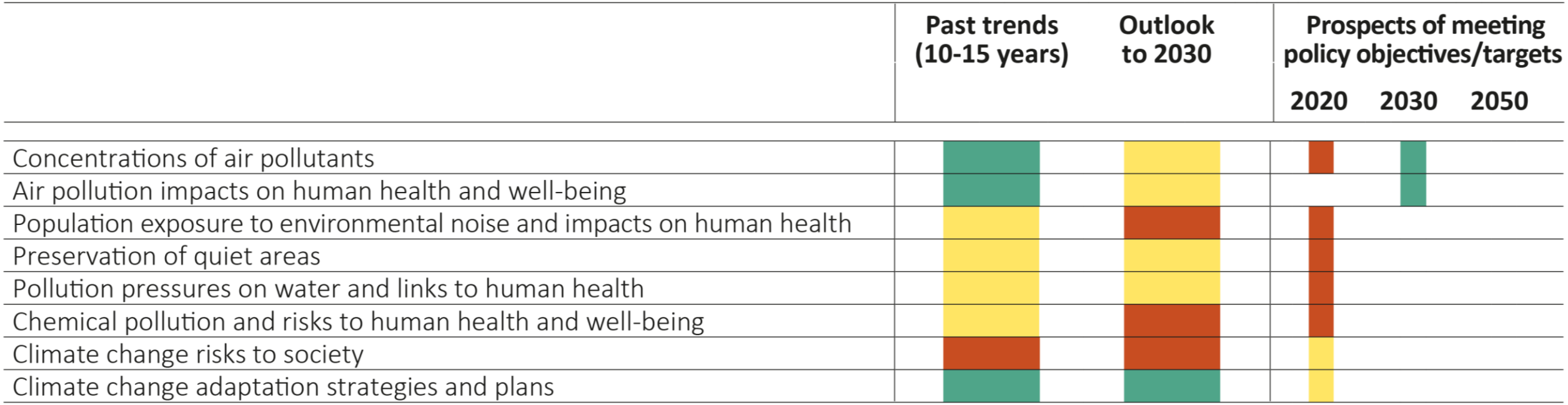
3 Health and well-being

“ Air pollution is the single largest environmental risk to the health of Europeans ”

SOER 2020

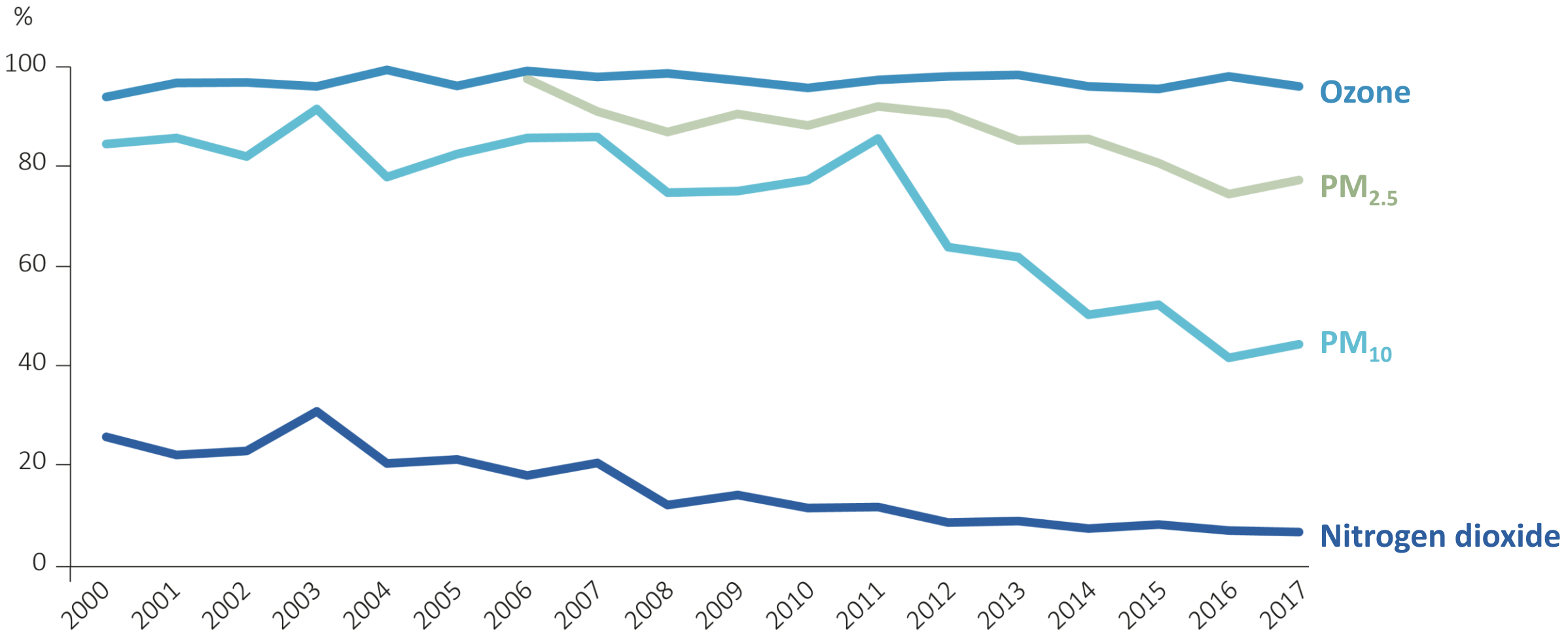
© Ieva Bruneniece, My City, EEA

3. Environmental risks to health and well-being



Environmental risks: air pollution is still a big problem

EU urban population exposed to air pollutant concentrations above selected **WHO air quality guidelines**



Environmental risks: chemical pollution

~ 100 000 chemicals on the market

~ 22 600 chemicals with a use over 1 tonne per year

~ 4 700 chemicals with a use over 100 tonnes per year prioritised in hazard characterisation and evaluation

~500 chemicals
extensively characterised for their hazards and exposures

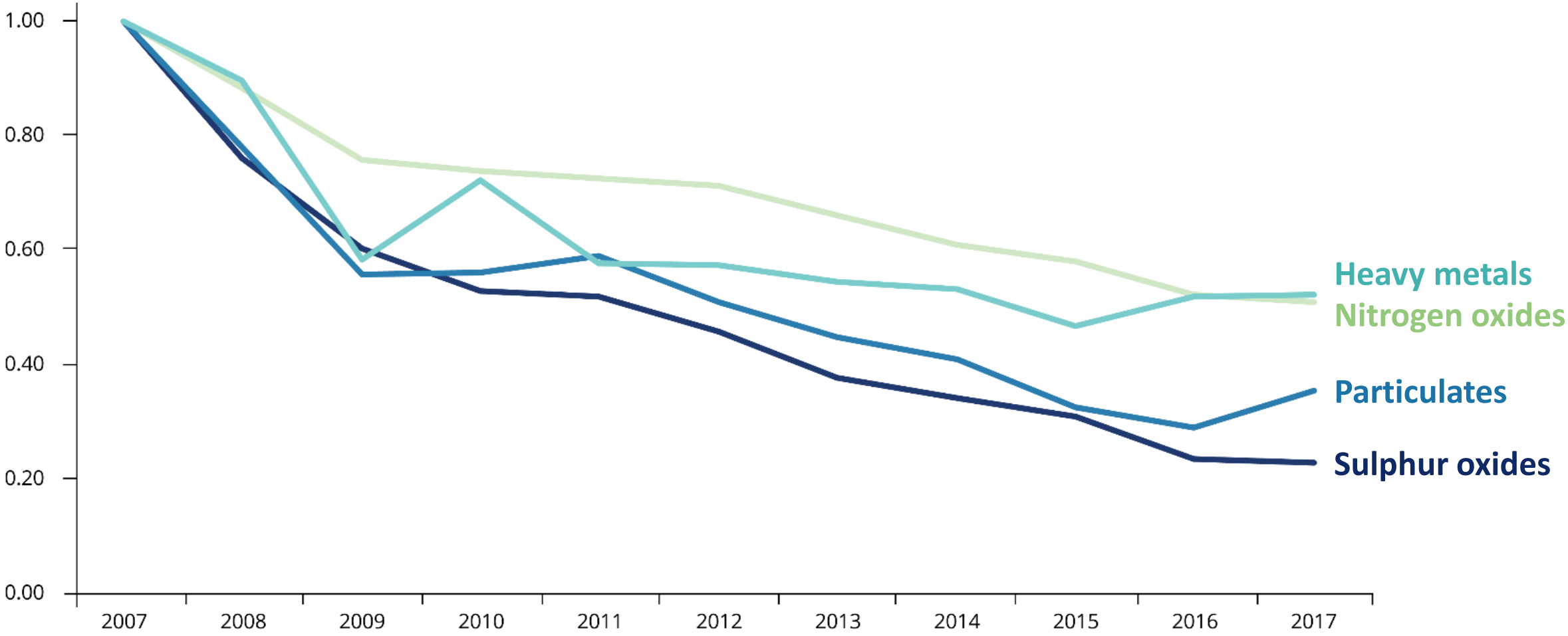
~10 000 chemicals
fairly well characterised for a subset of their hazards and exposures

~20 000 chemicals
with limited characterisation for their hazards and exposures

~70 000 chemicals
with poor characterisation for their hazards and exposures

Industrial pollution: some emissions are decreasing

Emissions of key industrial pollutants, EEA-33



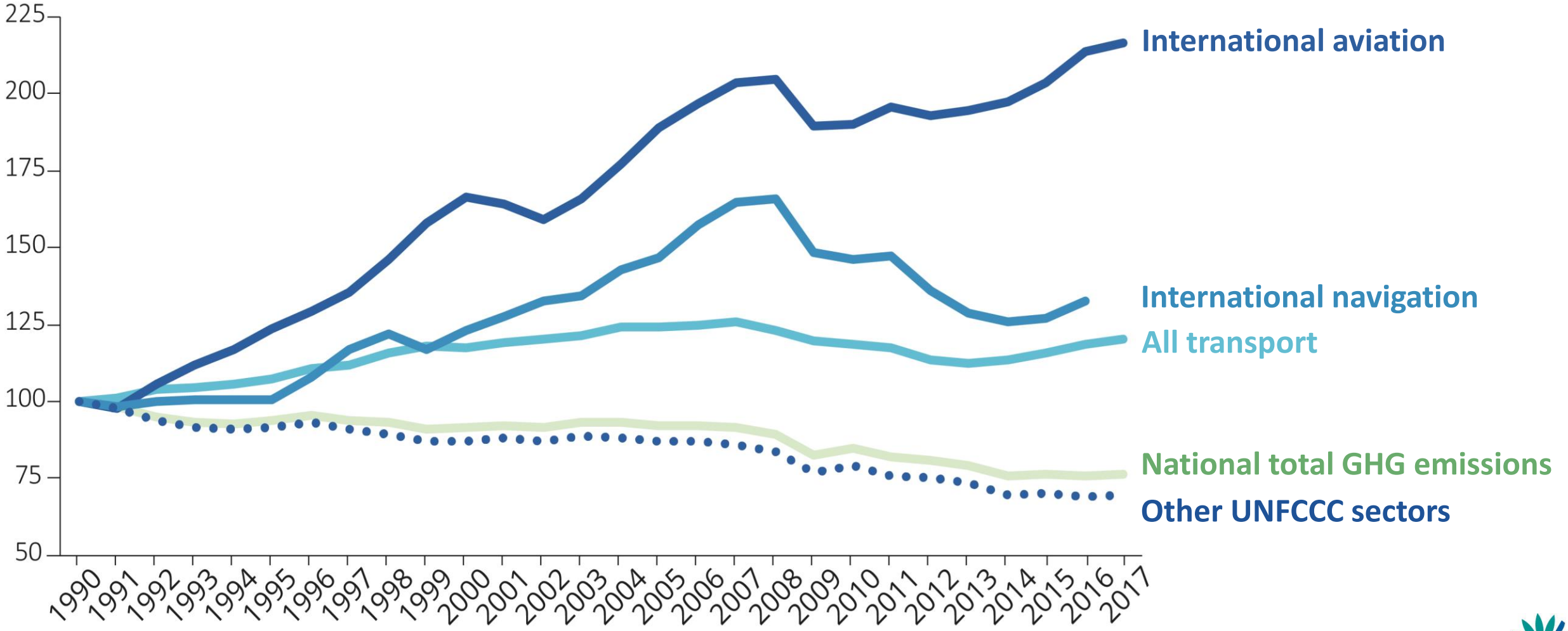
Environmental policy integration

“Policy needs to consider environmental, economic, social and governance dimensions and their synergies and trade-offs”

SOER 2020

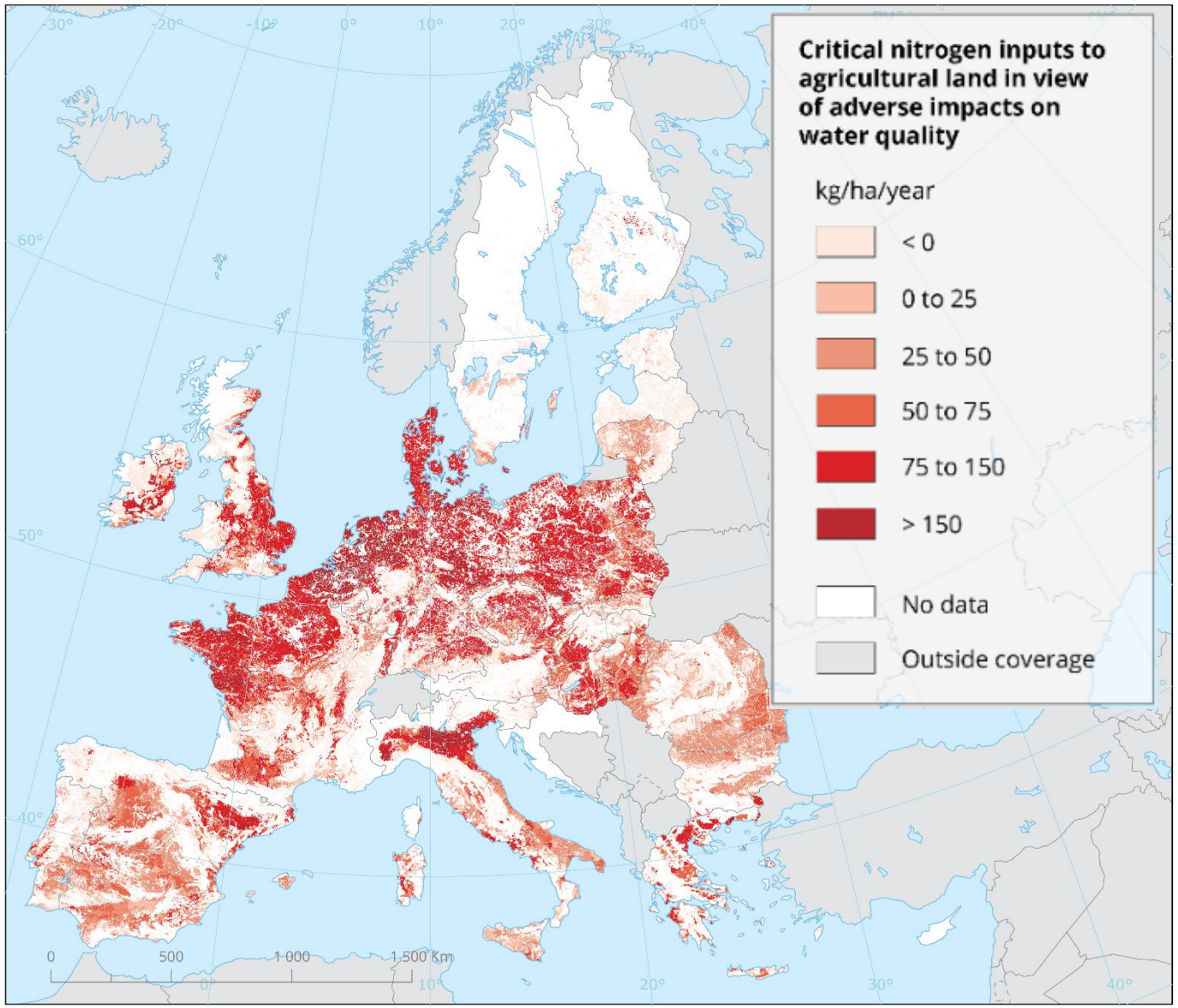
Policy integration largely unsuccessful: transport

EU GHG emissions in the transport sector, 1990-2017 (1990 = 100%)



European Environment Agency

Policy integration largely unsuccessful: agriculture



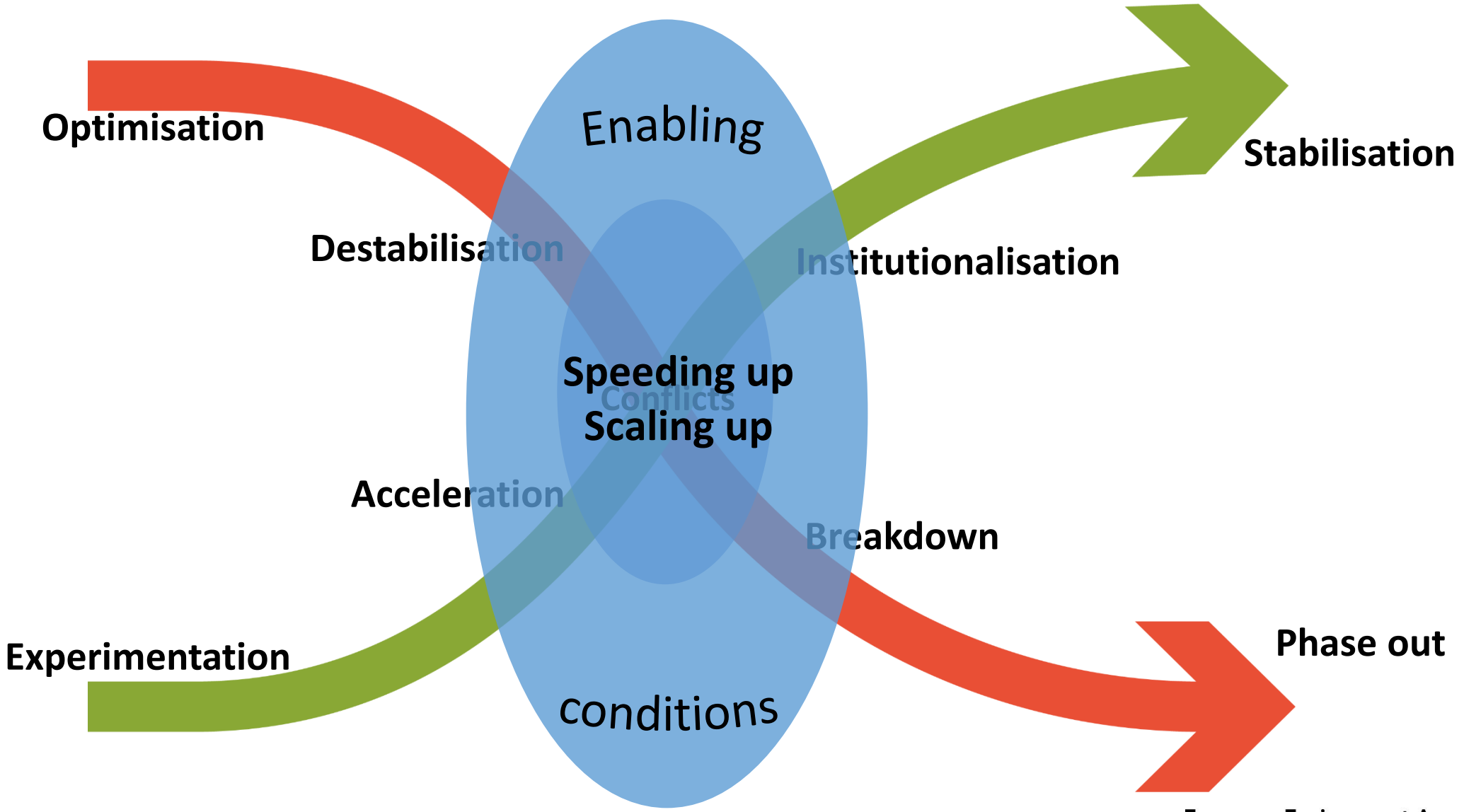
- Unsustainable agriculture still main threat to biodiversity and natural capital in Europe
- Pollution of soil, water, air and food
- Over-exploitation of natural resources
- **Greening of the CAP shown to be ineffective**

Transitions towards sustainability

"Diffusion of clean technologies and the transformation of entire production-consumption systems will require huge shifts in investments"

SOER 2020

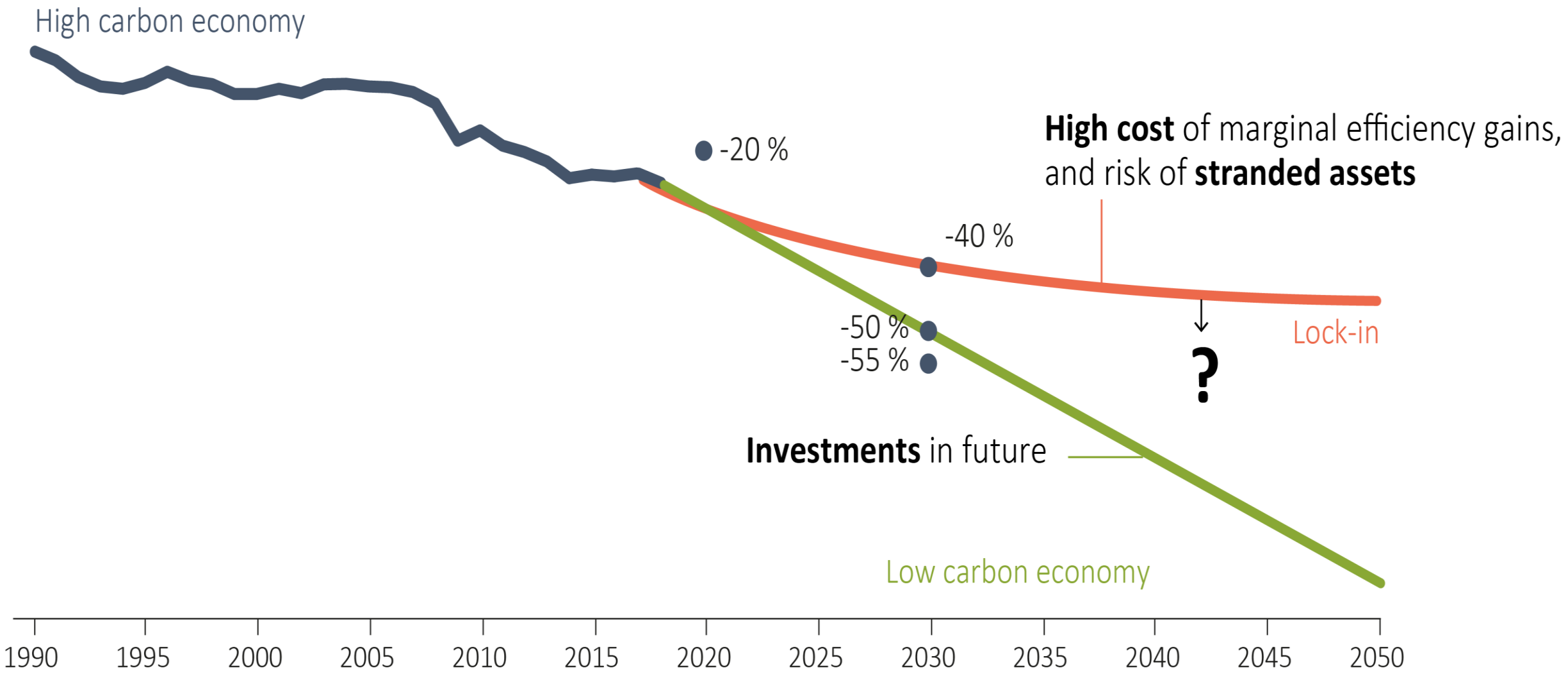
Systemic change is disruptive: the ‘x-curve’



Source: Loorbach et al .

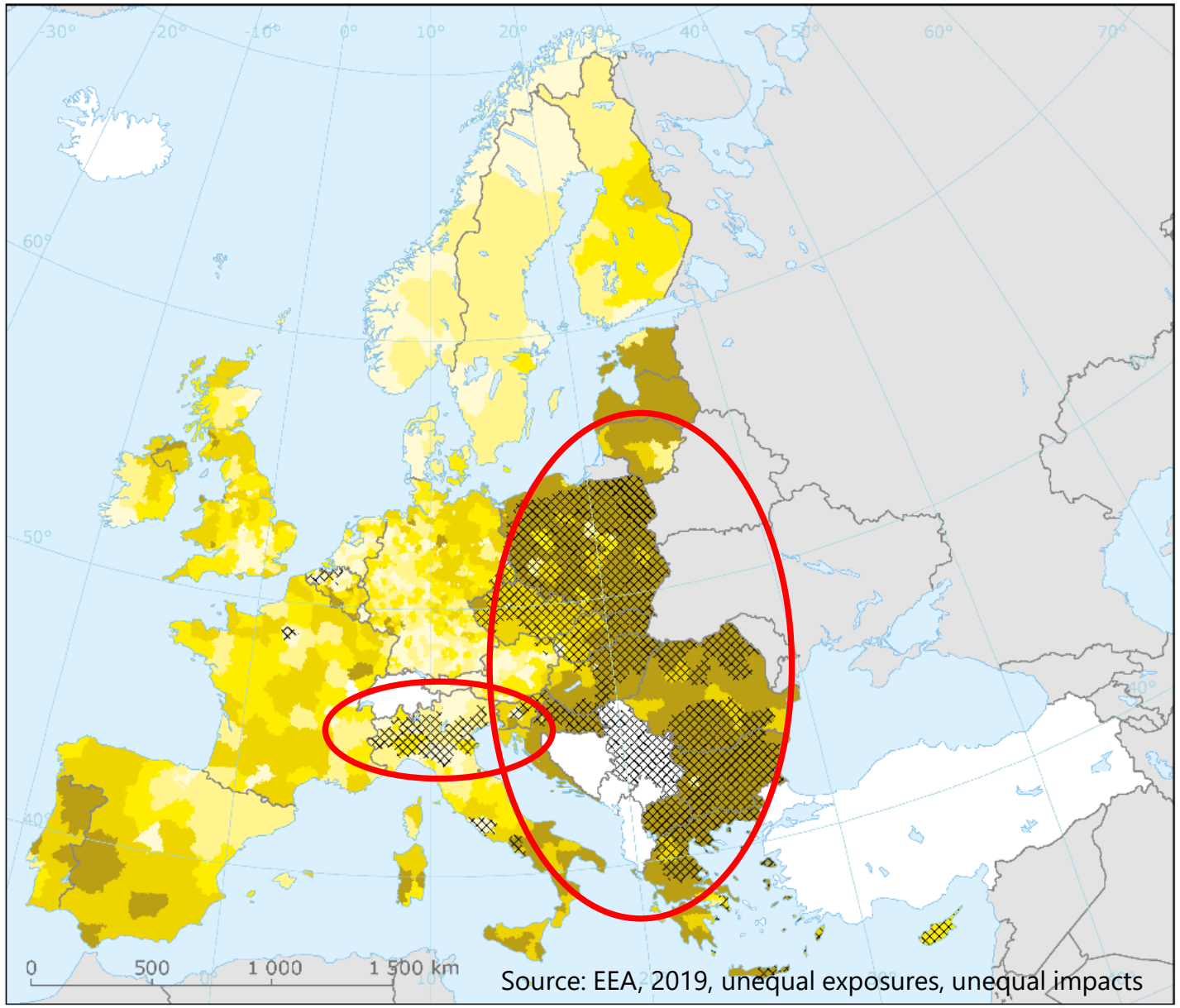
Investing in sustainability, not dead-end streets

SOER2020



European Environment Agency

Social vulnerability and just transitions



Source: EEA, 2019, unequal exposures, unequal impacts

Exposure to $PM_{2.5}$ mapped against GDP per capita (2013-2014)

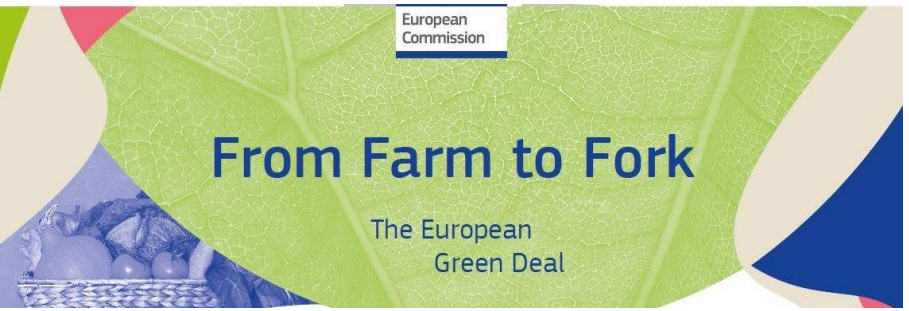
GDP per capita

- Very low (bottom 20 %)
- Low
- Medium
- High
- Very high (top 20 %)
- No data

Exposure to $PM_{2.5}$

- Most polluted 20 %
- Outside coverage

The window is closing: bold action is needed



1. **Implementation**: we should do things better
2. **Sustainability as guiding principle**: we should do things differently
3. **The right investments**: transformative initiatives; not marginal efficiency gains
4. **Fostering innovation**: throughout society

Thank you

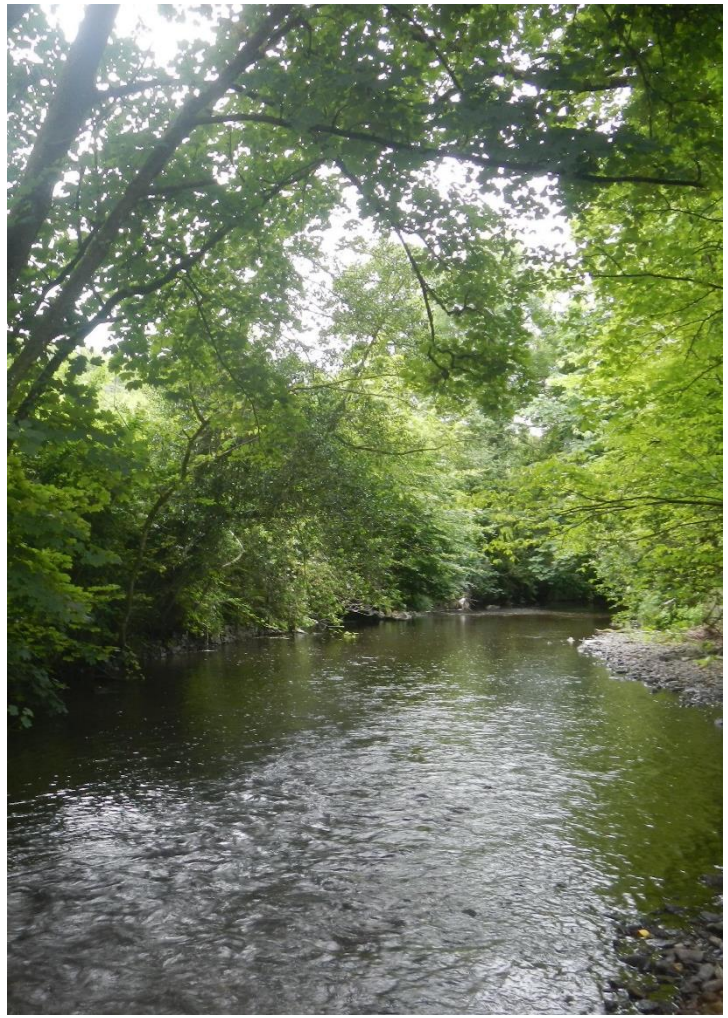
Dr Hans Bruyninckx | US EPA Webinar| 27 January 2021

Panel Discussion

8:40 – 9:45 - Panel discussion - State of the Environment: European and US perspectives **Moderator: Per Mickwitz** – Lund University, Chair of the EEA Scientific Committee	
EU panellist from Academia	**Frank Geels** - Manchester University, Member of the EEA Scientific Committee
EU panellist from Member States	**Laura Burke**, Chair of the EEA Management Board, Ireland - EPA Director
US panellist from Academia	**Richard Moss**, Adjunct Professor, Department of Geographical Sciences, University of Maryland; Non-resident Fellow, Andlinger Center for Energy and Environment, Princeton University
US panellist from EPA	**Katherine Dawes**, EPA Evidence Act Acting Evaluation Officer

Presented by Laura Burke

Irish Environmental Protection Agency



- Independent Public Body, established in 1993
- Roles
  - Environmental and Radiological Protection
  - Regulation, Knowledge, Advocacy
- State of the Environment Report 2020
  - “The overall quality of Ireland’s environment is not what it should be, and the outlook is not optimistic unless we accelerate action”

Laura Burke, Director General

Presented by Richard Moss

Next Generation Environmental Information

CONTINUE TO SIGNAL THE NEED FOR TRANSFORMATION

INCREASE SUPPORT TO HELP COMMUNITIES TRANSFORM

INNOVATE ASSESSMENTS: SOLUTIONS AND METHODS

Resource: Roadmap for Sustained Climate Assessment

Contact: Richard Moss rmoss@Princeton.edu
www.climateassessment.org

Presented by Katherine Dawes

The Foundations for Evidence-Based Policymaking Act of 2018 (Evidence Act)

- Bipartisan, bicameral legislation passed and signed on January 14, 2019.
- The law implements half of the recommendations from the bipartisan U.S. Commission on Evidence-Based Policymaking report The Promise of Evidence Based Policy Making.
- Provides a new federal framework to promote a culture of evaluation, continuous learning, and decision making using the best available evidence. Provisions:
  - Title I, Federal Evidence-Building Activities: (1) develop and issue a Learning Agenda (i.e., evidence-building plan) and Capacity Assessment as part of the 4-Year Strategic Plan; (2) publish an Annual Agency Evaluation Plan; (3) designate an Evaluation Officer and Statistical Official.
  - Title II, Government Data Act: (1) issue a Strategic Information Resources Management Plan and conduct a Comprehensive Data Inventory and (2) designate a Chief Data Officer.
  - Title III, Confidential Information Protection and Statistical Efficiency Act: (1) meet confidential information protection requirements and (2) make data assets available, as practicable, to any statistical agency and external researchers.
- Evidence Act at EPA:
  - Three 'designated officials': Evaluation Officer (Acting) – Katherine Dawes; Chief Data Officer – Dr. Richard Allen; Statistical Official – Dr. Alex Marten.
  - Established the Evidence Act Workgroup as standing advisory body.
  - In 2021 – Develop a Learning Agenda, Capacity Assessment to be issued with FY 2022-2026 EPA Strategic Plan; Issue EPA's Evaluation and Evidence Policy.